In the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) An isolated Nurr1 gene, or a functional fragment or variant thereof, which gene, fragment or variant includes one or more mutations resulting in the encoding of one or more amino-acid sequence changes in the product encoded by the gene, fragment or variant, which changes are selected from the group consisting of Met97Val (M97V), His103Arg (H103R), Tyr121del (Y121del) and Tyr122del (Y122del), and ~~wherein the mutation(s) in the gene, fragment or variant is/are linked to schizophrenia and/or manic depressive illness~~ which changes result in impaired binding of the mutated gene product to NurRE with consequent reduction of ability to effect transcriptional activity.

2. (previously presented) The gene, fragment or variant according to claim 1, which comprises the exons of the Nurr1 gene.

3. (previously presented) The gene, fragment or variant according to claim 1, which comprises exon 3 of the Nurr1 gene.

4. (previously presented) The gene, fragment or variant according to claim 1, which comprises a mutation resulting in the encoding of the amino-acid sequence change Met97Val.

5. (previously presented) The gene, fragment or variant according to claim 1, which comprises a mutation resulting in the encoding of the amino-acid sequence change His103Arg.

6. (previously presented) The gene, fragment or variant according to claim 1, which comprises a mutation resulting in the encoding of the amino-acid sequence change Tyr121del or Tyr122del.

7. (canceled)

8. (previously presented) A vector comprising a nucleic acid according to any one of claims 1-6.

9. (previously presented) An isolated recombinant cell carrying a vector according to claim 8.

10. (previously presented) An isolated cell carrying one or more mutations in the Nurr1 gene resulting in the encoding of one or more amino-acid sequence changes, which changes are selected from the group consisting of Met97Val (M97V), His103Arg (H103R), Tyr121del (Y121del) and Tyr122del (Y122del) in its genome.

11. (previously presented) A cell culture comprising cells according to claim 9, which cells are immortalized cells.

12. (withdrawn) A protein or a peptide encoded by a gene or a gene fragment or variant according to claim 1.

13. (withdrawn) A protein or peptide according to claim 12, which includes a Val residue in the position corresponding to amino acid no. 97 of the wild type Nurr1 protein.

14. (withdrawn) A protein or peptide according to claim 12, which includes an Arg residue in the position corresponding to amino acid no. 103 of the wild type Nurr1 protein.

15. (withdrawn) A protein or peptide according to claim 12, which does not include any Tyr residue in the position corresponding to amino acid no. 121 or 122 of the wild type Nurr1 protein.

16. (withdrawn) A method of screening for pharmaceutically active substances, wherein a nucleic acid according to any one of claims 1-6 or a protein or peptide according to any one of claims 12-15 is used as a lead compound to identify substances capable of altering the biological effect of said nucleic acid, or protein or peptide.

17. (withdrawn) A pharmaceutical composition comprising a substance identified by the method of claim 16 in combination with a pharmaceutically acceptable carrier.

18. (withdrawn) An antibody raised against a protein or peptide according to any one of claims 12-15.

19. (withdrawn) A transgenic, non-human animal containing a gene or a gene fragment or variant according to any one of claims 1-6.

20. (withdrawn) A transgenic mouse which has a mutation in the chromosome corresponding to the human chromosome 2q22-23 of said mouse, or an ancestor thereof, introduced at an embryonic stage such that said transgene replaces an endogenous allele resulting in said mutation, which transgenic mouse has one or more mutations selected from

the group consisting of Met97Val (M97V), His103Arg (H103R), Tyr121del (Y121del) and Tyr122del (Y122del).

21-23. (canceled)

24. (withdrawn) A method for the treatment of a psychotic condition, which comprises administering to a host in need of such treatment a therapeutically effective amount of a pharmaceutical composition according to claim 17.

25. (withdrawn) A pharmaceutical composition comprising an antibody according to claim 18 in combination with a pharmaceutically acceptable carrier.

26. (withdrawn) A method of detecting the presence of a mutation in exon 3 of the Nurr1 gene, which mutation is selected from the group consisting of Met97Val, His103Arg, Tyr121del and Tyr122del, said method comprising obtaining a biological sample from a mammalian subject and analyzing said sample for said mutation.

27. (withdrawn) A method according to claim 26, wherein the biological sample is analyzed by isolating DNA from said sample, amplifying said DNA, and hybridizing said DNA to a labeled oligonucleotide probe that specifically hybridizes to mutant DNA containing a G as the first base of codon no. 97; a G as the second base of codon no. 103; or a deleted TAC in codon no. 121 or 122, or to the close vicinity of said DNA.

28. (withdrawn) A kit for performing the method according to claim 26 or 27, which kit comprises:

a) reagents for amplification of one or more of the mutated sites; and/or

b) enzymes for specific cleavage of DNA; and

c) optionally suitable labels.

29. (withdrawn) A method of treating or preventing a condition associated with schizophrenia and/or manic depression in a patient in need of such treatment, wherein a mutation in exon 3 of the Nurr1 gene is corrected, which mutation is selected from the group consisting of Met97Val, His103Arg, Tyr121del and Tyr122del.

30. (withdrawn) A method according to claim 29, wherein the DNA of one or more of said mutations is replaced by DNA having the native, non-mutated base sequence using a vector suitable for transfecting the patient.

31. (withdrawn) A method according to claim 29, wherein cells carrying the native, non-mutated base sequence in the positions corresponding to one or more of said mutations are introduced in said patient.

32. (canceled)

33. (canceled)

34. (previously presented) An isolated cell culture comprising cells according to claim 10, which cells are immortalized cells.

35. (withdrawn) A method for the treatment of a psychotic condition, which comprises administering to a host in need of such treatment a therapeutically effective amount of a pharmaceutical composition according to claim 25.

36. (withdrawn) A method according to claim 24, wherein the condition is schizophrenia or manic depressive disorder.

37. (withdrawn) A method according to claim 35, wherein the condition is schizophrenia or manic depressive disorder.